WHAT WE CLAIM IS:

1. A process for spinning a stable partially oriented yarn, comprising extruding a polyester polymer through a spinneret at a spinning speed less than 2600 mpm and a temperature between about 250°C and 270°C, wherein said polymer comprises at least 85 mole % poly(trimethylene terephthalate) wherein at least 85 mole % of repeating units consist of trimethylene units, and wherein said polymer has an intrinsic viscosity of at least 0.70 dl/g.

2. The process of claim 1, wherein the spinning speed is between 1650 mpm and 2300 mpm.

3. A process for continuous draw-texturing a partially oriented yarn made from a polymer substantially comprising poly(trimethylene terephthalate), comprising the steps of:

(a) feeding the yarn through a heater, wherein the heater is set to a temperature between about 160°C and 200°C;

(b) feeding the yarn to a twist insertion device, whereby the yarn is twisted such that in a region between the twist insertion device and up to and including the heater, the yarn has a twist angle of about 46 degrees to about 52 degrees; and

(c) winding the yarn on a winder.

4. The process of claim 3, wherein the twist insertion device is a friction spindle.

5. The process of claim 4, wherein the friction spindle comprises at least one entry guide disc, three to five working discs, and one exit guide disc.

6. The process of claim 4, wherein the friction spindle comprises at least one entry guide disc, three to four working discs, and one exit guide disc.

7. The process of claim 4, wherein the friction spindle comprises working discs spaced apart by about 0.75 to 1.0 mm.

8. The process of claim 3, further comprising the step of, prior to step (a), passing the yarn through a twist isolation device.

9. The process of claim 3, wherein the partially oriented yarn has an elongation to break of at least 110%.

10. The process of claim 3, wherein the partially oriented yarn has an elongation to break of at least 120%.

11. The process of claim 3, wherein the partially oriented yarn has an elongation to break of at least 130%.

12. The process of claim 3, wherein the polymer has an intrinsic viscosity of at least 0.70 dl/g.

13. The process of claim 3, wherein the polymer has an intrinsic viscosity of at least 0.90 dl/g.

14. The process of claim 3, wherein the polymer has an intrinsic viscosity of at least 1.0 dl/g.

15. The process of claim 3, wherein the polymer has an intrinsic viscosity of at least 0.70 dl/g and the partially oriented yarn has an elongation to break of at least 110%.

16. The process of claim 15, wherein the polymer has an intrinsic viscosity of at least 0.90 dl/g.

17. The process of claim 15, wherein the polymer has an intrinsic viscosity of at least 1.0 dl/g.

18. The process of claim 15, wherein the partially oriented yarn has an elongation to break of at least 120%.

19. The process of claim 15, further comprising the step of, prior to step (a), passing the yarn through a twist isolation device.

20. The process of claim 19, wherein the twist insertion device is a friction spindle.